

Appl. No. 10/808,625
Amdt. sent February 16, 2007
Reply to Office Action of August 18, 2006

PATENT

Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 11. This sheet, which includes Fig. 11 replaces the original sheet including Fig. 11.

Attachment: Replacement Sheet

REMARKS/ARGUMENTS

Claims 1, 2, and 5 have been amended. Claim 4 has been cancelled. No new claims have been added and no new matter has been introduced by entry of this amendment. Accordingly, claims 1-3, and 5-8 are pending.

Claims 5-8 are objected to under 37 CFR § 1.75(c) as being in improper form because a multiple dependent claim (should refer to other claim in the alternative only) and/or (cannot depend from any other multiple dependent claim).

Claims 1-3 are rejected under 35 U.S.C. § 102(e) as being anticipated by Satoh et al. (US 2003/0131621 A1) (hereinafter "Satoh").

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Satoh.

Objection to the Specification

Applicants thank the Examiner for pointing out the grammatical error in the specification. Applicants have amended the specification accordingly to recite "A siphon effect by the dropping water causes the pressure in the pipe line to be negative so as to induce cavitation . . ." This amendment is believed to overcome the objection to the specification.

Objections to the Drawings

Applicants thank the Examiner for pointing out the informality in the drawings. Figure 11 has been labeled as prior art in accordance with MPEP §6.08.2(g). This amendment is believed to overcome the objection to the drawings.

Objections to the Claims

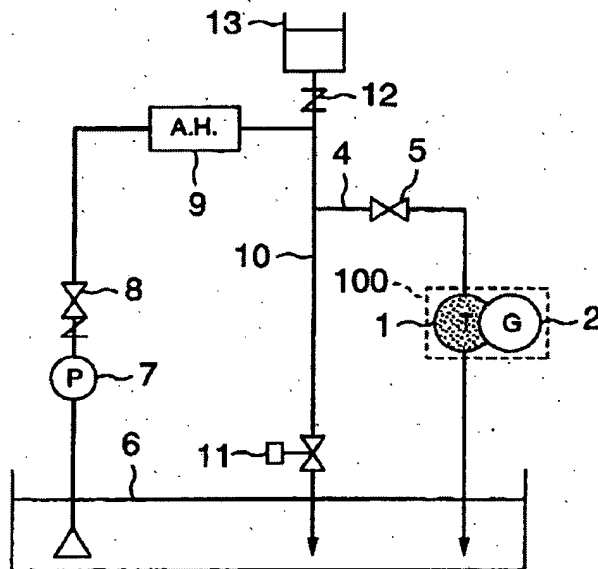
Applicants thank the Examiner for pointing out various informalities in the claims. Multiple dependent claim 4 has been canceled without prejudice and dependent claims 5-8 have been amended accordingly. These amendments are believed to overcome the objections to the claims.

Section 112 Rejection of the Claims

Claims 1 and 2 were rejected for reciting broad language followed by narrow language. Claims 1 and 2 have been amended to only recite the broad language "air conditioning loads". Accordingly, these amendments are believed to overcome the section 112 rejection to the claims.

Section 102 Rejection of Claims 1-3

Embodiments of the present invention relate to an air-conditioning system and a method for installing an energy recovery apparatus. More particularly, embodiments of the present invention disclose a pressure sustaining valve within a return pipeline and capable of opening and closing based upon varying water pressure in the return pipeline. Independent claims 1 and 2, from which all other claims depend, recite this feature as illustrated in the embodiment exemplar of Fig. 1 of the present specification:



1. A method of using an energy recovery apparatus in an air-conditioning system comprising a water tank, . . . , and a pressure sustaining valve disposed in the return pipe line, the method comprising the steps of:

. . . wherein the pressure sustaining valve is configured to selectively open and close depending on pressure in the return pipe line. (Emphasis added)

* * *

2. An air-conditioning system comprising: a water tank; . . . ; and a pressure sustaining valve disposed in the return pipe line, the system further comprising:

. . . wherein the pressure sustaining valve is configured to selectively open and close depending on pressure in the return pipe line. (Emphasis added)

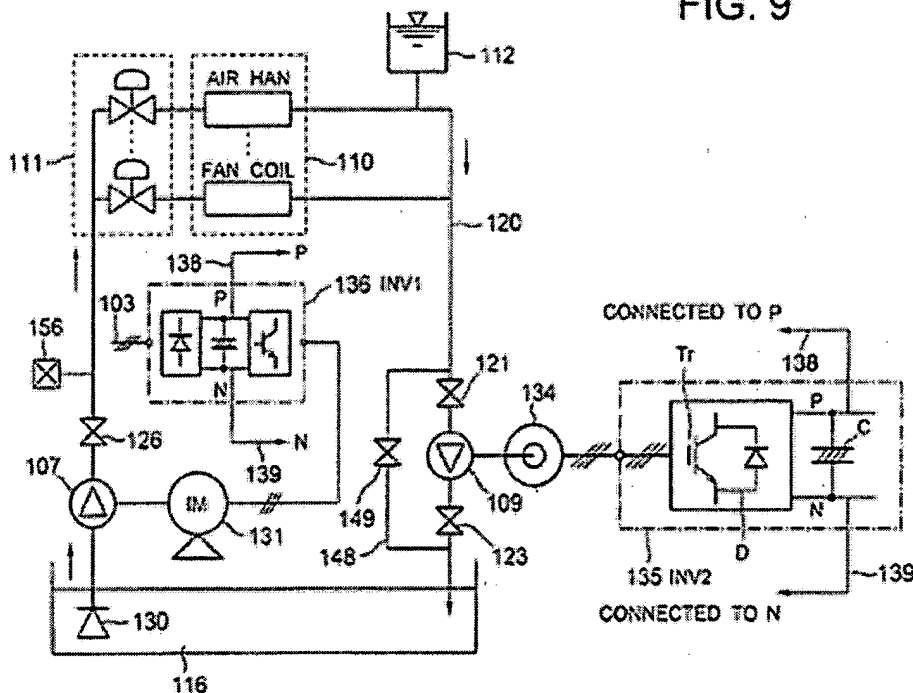
Claims 1-3 were rejected as anticipated based on Satoh. These claim rejections are traversed as follows.

As a threshold matter, the Examiner is respectfully reminded that pending independent claims 1 and 2 stand rejected as anticipated, and not merely obvious, in view of Satoh:

[t]he distinction between rejections based on 35 U.S.C. 102 and those based on 35 U.S.C. 103 should be kept in mind. Under the former, the claim is anticipated by the reference. No question of obviousness is present. In other words, for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. (Emphasis added; MPEP 706.02)

Here, Satoh fails to teach, either explicitly or impliedly, a pressure sustaining valve disposed in a return pipe line and configured to open and close in response to pressure variations in the return pipe line. Figure 9 of Satoh, relied on by the examiner, is reproduced below:

FIG. 9



Satoh discloses a method for collecting unused energy in a building through waterwheel electric power generation. Valve 149 and pipe-segment 148, which are cited by Examiner and more clearly illustrated in Fig. 6 as reference numbers 29 and 29a, respectively, are used in order to bypass valves before and after the waterwheel 109 (See paragraph [0054]). In addition, pressure sensors are located at the inlet side of the water wheel and the outlet side of the water wheel, but not at bypass valve 29 or in bypass pipe-segment 29a (See paragraph [0054]). As such, bypass valve 29 is not configured to selectively adjust in response to varying water pressure because there are no pressure sensors located within bypass pipe 29a or at bypass valve

29. Furthermore, the type of operation described in Satoh requires additional sensors and processing, thereby increasing installation and operation costs. In short, the Satoh reference fails to teach, either explicitly or impliedly, a pressure sustaining valve disposed in the return pipeline and configured to selectively open and close depending on water pressure in the pipe, as substantially recited in independent claims 1 and 2.

Based upon the failure of the art relied upon by the Examiner to teach, either explicitly or impliedly, all the elements independent claims 1 and 2, it is respectfully asserted that these claims are patentable over the cited art. Claim 3 depends from claim 2 and is believed to be patentable at least for the reason it depends from an allowable base claim.

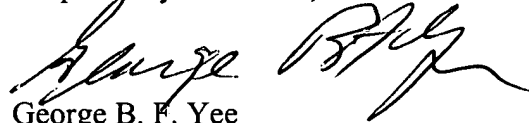
Section 103 Rejection of the Claim 4

The Examiner also rejected claims 4 as obvious under 35 U.S.C. 103(a) based on Satoh. Applicant respectfully request withdrawal of the rejection and allowance of the claim for at least the reason that claim 4 depends upon an independent claim that is believed to be allowable as discussed in detail above.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,


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